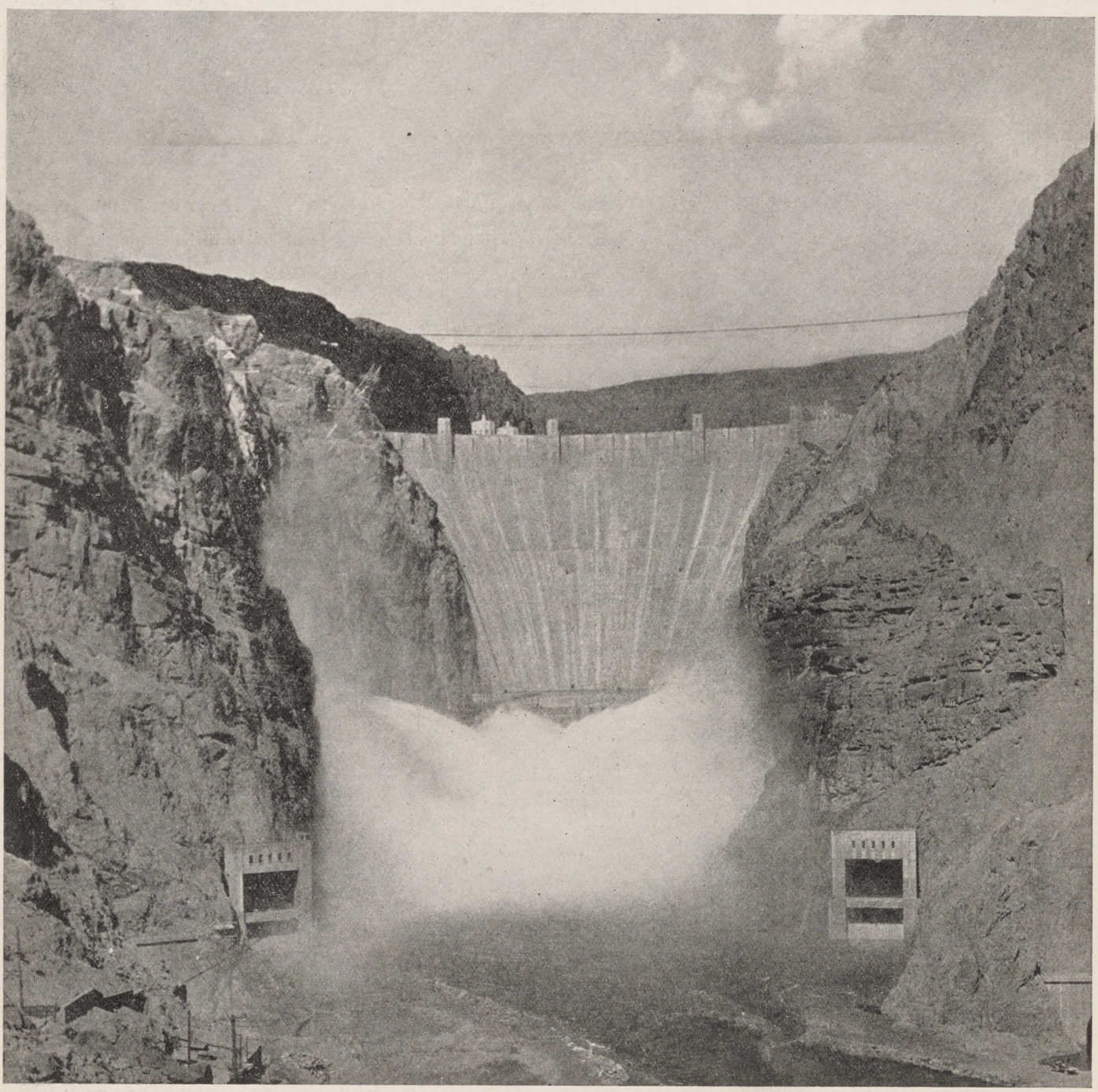
• COLORADO RIVER •

AQUEDUCT NEWS

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Vol. III. SEPTEMBER 25, 1936 No. 18



All twelve needle valves in action at Boulder Dam creating a display greater than Niagara. This picture taken by staff photographer W. N. Fox shows all the valves open for the first, and probably the last, time. Story page 3.

• COLORADO RIVER •
AQUEDUCT NEWS
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

LOS ANGELES, CALIFORNIA

Published twice monthly in the interest of Field and Office Workers on the Colorado River Aqueduct, and for the information of all other citizens of the Metropolitan Water District.

Vol. III September 25, 1936 No. 18

M. W. D. Board Gives Opinion on Probable Water Rate

Action was taken by the District's Board of Directors on September 18, expressing its judgment that a rate of $15.00 per acre foot should be charged for aqueduct water delivered to cities or areas within the District. In announcing this water rate figure, the Board issued the following statement:

"In the light of conditions now apparent, it is the judgment of the Board of Directors of the Metropolitan Water District of Southern California that a rate of $15.00 per acre foot should be charged by the District for the wholesale service of water to cities or areas within the District.

"Colorado River Aqueduct water will be available for delivery and sale to cities or areas within the District and will not be sold or released to areas outside the District's boundaries."

It was pointed out that this is a wholesale rate, and that water will be delivered to consumers at retail rates to be established by the various members of the District.

A. R. Baker, engineer in charge of the Materials and Inspection Division of the District, died after a brief illness on Monday, September 7. He was born in Norwalk, Ohio, in 1882, his engineering experience covering a period of 33 years. Mr. Baker was employed by the District in 1929, working on preliminary investigations, and financial studies, and was later placed in charge of co-ordinating cement, steel, and other shipments, as well as the supervision of material inspection. He is survived by his wife, two daughters and a son.

If it weren't for the rather obvious water cooler on the front porch, this attractive cottage might well pass as one of the model homes in Westwood. Instead, it's Bob Allen's headquarters at Camino, the center of construction activities on the transmission lines. The building is one of several to be later used as permanent operators' quarters. Camino is the switching station for the Gene and Iron Mountain sections of the line. One of the 230 k.v. transmission line towers is seen back of the house.

Directory

BOARD OF DIRECTORS

W. P. Whitsett, Chairman
Franklin Thomas, Vice-Chairman
S. H. Finley, Secretary

Anaheim.....E. P. Hapgood
Beverly Hills.....Arthur Taylor
Burbank.....J. L. Norwood
Compton.....Warren W. Butler
Fullerton .....Walter Humphreys
Glendale .....Bernard Brennan
Long Beach.....William M. Cook
Los Angeles .....I. Eisner
Los Angeles .....Perry H. Greer
Los Angeles .....Otto J. Emme
Los Angeles .....D. W. Pontius
Los Angeles .....John R. Richards
Los Angeles.....Victor H. Rossetti
Los Angeles .....W. P. Whitsett
Pasadena .....Franklin Thomas
San Marino.....J. H. Ramboz
Santa Ana.....S. H. Finley
Santa Monica, Edmond S. Gillette
Torrance .....Charles T. Rippy

Charles H. Toll, Treasurer
D. W. Pontius, Controller

GENERAL STAFF

General Manager and Chief Engineer .....F. E. Weymouth
Asst. Gen. Mgr.....J. L. Burkholder
Asst. Chief Engineer.....Julian Hinds
General Counsel .....James H. Howard
Asst. Gen. Counsel .....Arthur A. Weber
Asst. Controller.....J. M. Luney
General Supt.....James Munn
Chief Elec. Engineer.....J. M. Gaylord
Asst. to Gen. Mgr.....Don J. Kinsey
Secy. to Gen. Mgr.....Elisabeth von Hagen

DIVISION ENGINEERS

Divisions 1 & 2....W. E. Whittier
Divisions 2 & 3.....John Stearns
Division 4.....R. C. Booth
Divisions 5 & 6.....J. B. Bond
Distribution.....R. B. Diemer
Transmission.....Robert N. Allen

SUPERINTENDENTS

(Main Aqueduct Tunnels)

Colorado River, Copper Basin and Whipple Mt. Tunnels, Walsh Construction Co., W. A. Huntington and L. M. Ramey, Tunnel Supts.

Coxcomb East and Iron Mt. tunnels, Winston Bros., E. A. Bernard, Gen. Supt.; F. T. Hillman and R. V. Johnson, Tunnel Supts.

Iron Mt. Tunnel, West Portal, Utah Construction Co., Ben Arp, Gen. Supt.

East Eagle Mt. Tunnel and West Eagle Mt. Tunnel, east portion, Broderick & Gordon, John Will, Gen. Supt.

Coachella Tunnel, Dist. Force Acct., R. C. Booth, Gen Supt.

East Coachella Tunnel and 1000 Palms Tunnel, Concrete, B. T. Davis, Supt., J. C. Fisher, Guy Taylor, Gen. Foremen.

Thousand Palms Siphon, M. Hjalmarson, Supt.

Long Canyon and Wide Canyon Tunnels, Concrete, Kenneth MacIsaac, Supt.

Little Morongo, Excavation, R. Ferry, Supt.

San Jacinto Tunnel, District Force Acct., B. C. Leadbetter, Gen. Supt.; A. L. Simpson, John Austin and C. E. Sides, Tunnel Supts.; Chas. F. Thomas, Jr., Gen. Foreman.

Valverde Tunnel, Dravo Contr. Co., R. W. Remp, Gen. Supt.; H. C. Richardson, Asst. Gen. Supt.; Fred Youmans, Tunnel Supt.

(Distribution Tunnels)

Monrovia tunnels Nos. 1, 2 and 3, West Construction Co., H. E. Carleton, Gen. Supt.; O. V. Humason, Peter Brisbols and Angus MacDonnell, Tunnel Supts.

Sierra Madre tunnel, J. F. Shea Co., Inc., Edmund H. Shea, Supt.

Pasadena tunnel, San Rafael tunnels Nos. 1 and 2, and Monrovia tunnel No. 4, L. E. Dixon Co., Bent Bros., Inc., and Johnson, Inc., S. D. Hackley, P. C. Guinn and W. N. Evans, Supts.

(Canal, Siphon, Conduit)

Schedules Nos. 1, 1A, 1B, 10, 10A, 10B, 11, 11A, 11B, 11C, 13, 13A, and 13B, Aqueduct Construction Co., S. T. Corfield, Gen. Supt.; Charles Harlowe, Jr., Excav. Supt.

Schedules Nos. 2, 2A, 2B, 3, 3A, 3B, 7 and 7A, Barrett & Hilp and Macco Corp.; H. W. McKinley, Supt.

Schedules Nos. 4, 4A, 5 and 5A, Jahn & Bressi Construction Co., Joseph Muscolo, Gen. Supt.; Dominick Bressi, Asst. Gen. Supt.

Schedules Nos. 6, 8, 8A and 8B, Clyde W. Wood and M. J. Bevanda, A. F. Weesner, Gen. Supt.; L. L. Green, Excav. Supt.; A. V. Fisher and V. S. Price, Concrete Supts.

Schedules Nos. 9, 9A, 9B and 9C, The Utah Construction Co., Ben Arp, Gen. Supt.; E. C. Caldwell, Excav. Supt.

Schedules Nos. 12 and 12A, Three Companies, Inc., C. J. Kavanagh, Supt.

Schedules Nos. 14, 15 and 16, Thompson-Starrett Co., Inc., Rodney Smith, Resident Engineer; William Hayes, Excav. Supt.

Schedule 17, Dist Force Acct., H. Hjalmarson, Supt., (Fan Hill).

Schedule 18J, Morrison-Knudsen, J. O. Young, Gen. Supt.

Schedules Nos. 18, 19 and 20, J. F. Shea Co., Inc., H. F. Rennebohm, Supt.

Schedules Nos. 20A, 20B, 20C, 21, 22 and 23, The Griffith Co., Harry Davis, Supt.

(Distribution Pipe Line)

Schedules No. 4P & 5P, American Concrete & Steel Pipe Co., Wm. A. Whiting, Gen. Supt.; D. H. Rankin, Plant Supt.; J. C. Connell, Const. Supt.

Schedules 6P & 7P, J. F. Shea Co., Inc., Gilbert Shea, Gen. Supt.; Don Lind, Plant Supt.

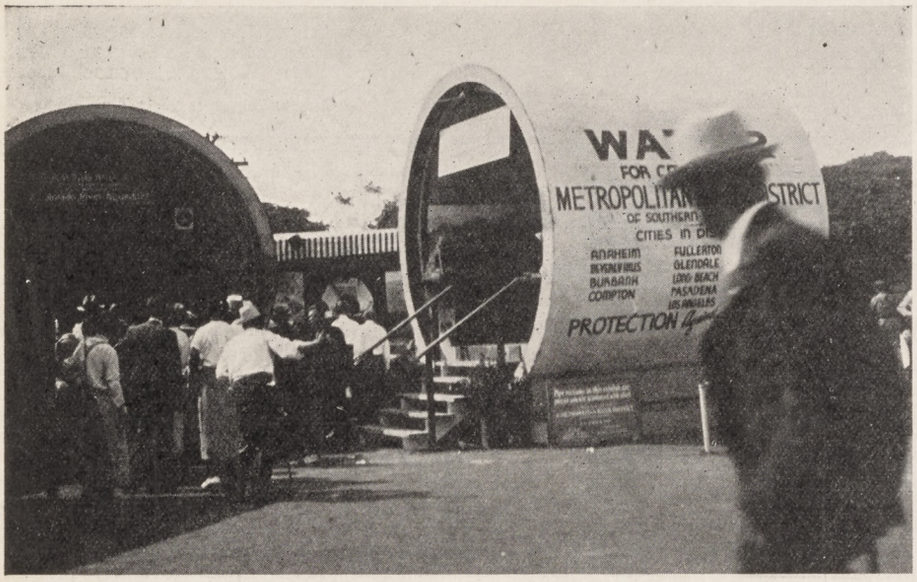
Schedule 8P, United Concrete Pipe Corp., John Huber, Plant Supt.; Charles Johnston, Const. Supt.

Schedules 2B & 2S, Western Pipe & Steel Co., L. L. White, Supt.

(Dams)

Cajalco dam, The Griffith Co., Harry Davis, Gen. Supt.

Parker dam, Six Cos., Inc., Frank Crowe, Gen. Supt.; E. A. Moritz, Eng. in charge.



The Metropolitan Water District exhibit at the Los Angeles County Fair, Pomona. Sept. 26 and 27 are "Aqueduct Days."

Unique Exhibit Placed in Fair

Two big semi-trailer units belonging to the J. F. Shea Company slipped unannounced into the "pre-opening" bustle of the L. A. County Fair Grounds at Pomona on Sunday, Sept. 13, and stopped the show. Part of the distribution system, two of the huge precast concrete sections of pipe from the Shea job on schedule 6, lumbered along back of the trucks—towering above the buildings and tents of the Fair grounds—to be installed as the District's unique exhibit at the Fair.

Spotted in the center of the Fair grounds, the pipe sections are so large that no other booth space is required by the District. One of them has been equipped as a motion picture stage, showing sound pictures of aqueduct construction work. The other, fixed so that people can walk through it, is decorated with working models, maps, and pictures of the big job. The pipes are easily seen from the main entrance of the Fair grounds.

TRANSFORMER MATERIALS

The General Electric Co. estimate that the following quantities of raw materials will be required to manufacture the 15 big transformers to be used for M. W. D. pumping plants: 465,000 lbs. silicon steel core laminations; 340,000 lbs. tank plate; 136,000 lbs. copper; 140,000 gals. oil! 11,000 ft. copper cooling tube. The General Electric Co. was awarded a contract to build the transformers for $737,295.

Boulder Valve Test Spectacular Event

Roaring out in great arcs at the down stream face of Boulder Dam, 12 huge jets of water—each spurting from a seven-foot diameter needle valve—created on September 11 an artificial waterfall 13 feet higher than Niagara. The spectacular demonstration was attended by members of the Board of Directors of the Metropolitan Water District who also saw the first Boulder Dam electric generator pulse into life as the President of the United States pressed a key 2000 miles away at the nation's capital.

The opening of all 12 valves, almost 200 feet above the water level between the power plant wings, was for testing purposes only. After the tests were completed, and the historic event recorded by motion picture cameras, the valves were closed—possibly never again will all of them open at the same time, unless because of emergency or extreme flood condition. Under normal conditions the water fall released from the vast reservoir created by the dam will be harnessed by the giant generators which will furnish electric power for the M. W. D. pumping plants, and for the City of Los Angeles, and So. Calif.

On October 9, the first of the 115,000 horsepower generator units will be put in service to send electricity to Los Angeles over the city's recently completed transmission line. The Metropolitan Water District will eventually use 36 per cent of all the power generated at Boulder Dam.

SAFETY FLAG AWARDS

Tunnel Operations:

Coachella Division

The Coachella Division Safety Flag was awarded to Fargo for the month of August during which no lost-time accidents were reported at that camp. During the first eight months of 1936 the Coachella Division lost-time accident frequency was 30—47 per cent below the frequency for 1935.

San Jacinto Tunnel

West Portal Camp again won the San Jacinto Safety Flag—making five consecutive months without a lost-time accident at that camp, with approximately 197,000 man-hours worked during the period.

The San Jacinto Tunnel lost-time accident frequency was 96 for the first eight months of 1936—56 per cent below the frequency for the tunnel during 1935.

Plans for Annual Picnic Announced

With an eye for showmanship, the field committee in charge of plans for the annual employees' picnic have coyly released more bait to excite the interest of "aqueduckers" in the gala occasion. The date has been officially set for November 8, a Sunday, which falls on a shut-down period, so that all may attend. The place, and the cost (minor item) have not as yet been fixed. The Bar-B-Que previously announced will still be the main attraction; however, the Field is arranging other hospitable events for the L. A. office people, to wit: tennis, golf and baseball—the "hospitable" part being the gracious manner in which the Field expects to demonstrate the proper manner of winning said events. Example: Having heard that Ross Farnsworth, who won the tennis trophy for the Field last year, will probably compete for the Office this year—twenty-five men from the wide open spaces are now entered in a playoff to find someone who will keep Farnsworth from repeating.

FALL "DRIVE" STARTS

Preparing for the fall "big push" on the eastern flank of the M. W. D., construction contractors are daily sending requests for hundreds of additional men to the District's Labor Office at 770 South San Pedro St., Los Angeles. With the resumption of open work concreting on October 1, plus construction on all five of the pumping plants, it is expected that some 1500 to 2000 men will be employed in addition to those already working on the aqueduct.

TUNNELS

August 15 to September 15, 1936

TUNNEL EXCAVATION (MILES)

	Completed	Remaining
Aqueduct	86.27	5.84
Distribution	14.10	2.10
Total	100.37	7.94

*TUNNEL LINING (MILES)

	Completed	Remaining
Aqueduct	57.05	35.06
Distribution	3.31	12.85
Total	60.36	47.91

*Arch considered to equal 0.9 completed section.

TUNNEL PROGRESS

CONTRACTOR	TUNNEL	LENGTH IN FEET	EXCAVATION IN FEET					LINING IN FEET						
			NUMBER OF SHIFTS	AVERAGE PER SHIFT	THIS PERIOD	TOTAL TO DATE	REMAINING	ARCH OR INVERT	NUMBER OF SHIFTS	AVERAGE PER SHIFT	THIS PERIOD	TOTAL TO DATE	REMAINING
AQUEDUCT—CONTRACT													
WALSH CONSTRUCTION CO.	COLORADO RIVER	5,482			Completed	5,482	0	Arch			0	5,475	7
								Invert				5,475	7
	COPPER BASIN NO. 1	705			Completed	705	0	Arch			0	696	9
								Invert			0	696	9
	COPPER BASIN NO. 2	11,568			Completed	11,568	0	Arch			0	11,568	0
								Invert			0	11,568	0
	WHIPPLE MOUNTAIN	(32,238)				(32,238)	(0)	Invert			0	0	(32,238)
	East from Adit	18,336			Completed	18,336	0	Arch	72	82.0	5,902	7,403	10,933
	West from Adit	13,902			Completed	13,902	0	Arch			0	13,898	4
WINSTON BROTHERS	IRON MT. (E. PORTION)	(23,645)				(23,645)	(0)						
								Invert			0	0	9,902
	East from Shaft	9,902			Completed	9,902	0	Arch			0	9,887	15
	West from Shaft	13,743			Completed	13,743	0	Invert	2	194.0	388	560	13,183
								Arch			0	13,728	15
UTAH CONSTRUCTION CO.	IRON MT. (W. PORTION)	16,208			Completed	16,208	0	Arch			0	16,208	0
								Invert			0	0	16,208
WINSTON BROTHERS	COXCOMB (From E. Portal)	17,795			Completed	17,795	0	Arch				0	17,795
								Invert				0	17,795
BRODERICK & GORDON	E. EAGLE (From W. Portal)	9,440			Completed	9,440	0					0	9,440
	W. EAGLE (E. PORTION)	(15,845)			Completed	(15,845)	(0)	Invert				0	(15,845)
	East from Adit	7,871				7,871	0	Arch				0	7,871
	West from Adit	7,974				7,974	0	Arch	48	91.1	4,374	5,280	2,694
DRAVO CONTRACTING CO.	VALVERDE	(38,015				(38,015)	0						
	East Portal to Shaft 3	21,415			Completed	21,415	0	Arch	0	0	0	38,014	1
	West from Shaft 3				Completed	8,964		Invert	2	116.5	233	38,014	1
	East from Adit	12,067			Completed	3,103	0						
	West from Adit	4,533			Completed	4,533	0						
	TOTALS Ft.	170,941				170,941	0	Arch	120	85.6	10,276	122,157	48,784
	Miles	(32.38)				(32.38)	(0)	Invert	4	155.2	621	56,313	114,628
AQUEDUCT — FORCE ACCOUNT													
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA	EAST COACHELLA	(96,605)				(96,605)	0						
	East Portion	28,512			Completed	28,512	0	Arch			0	28,512	0
								Invert			0	28,129	383
	West Portion	68,093			Completed	68,093	0	Arch	77	32.3	3,650	39,525	28,568
								Invert				0	68,093
	1000 PALMS NO. 1 (From W.P.)	16,058				16,058	0	Arch	77	46.3	3,562	6,234	9,824
	1000 PALMS NO. 2	3,838			Completed	3,838	0	Arch			0	3,838	0
								Invert			0	3,838	0
	WIDE CANYON NO. 1	14,305			Completed	14,305	0	Arch			0	14,305	0
	WIDE CANYON NO. 2	848			Completed	848	0	Arch			0	848	0
	SEVEN PALMS (From E. Prtl)	4,810			Completed	4,810	0						
	(From W. Prtl)	11,920				11,920		Arch			0	16,730	0
	LONG CANYON	15,305			Completed	15,305	0	Arch	35	93.6	3,275	15,305	0
	BLIND CANYON	6,836			Completed	6,836	0	Arch	17	71.1	1,208	1,208	5,628
	MORONGO NO. 1	5,725			Completed	5,725	0					0	5,725
	MORONGO NO. 2	1,902			Completed	1,902	0					0	1,902
	SAN JACINTO	(68,866)				(38,001)	(30,865)					0	(68,866)
	Cabazon Shaft to East Portal	8,880	62	5.5	339	8,880	0						
	Cabazon to Lawrence	26,817	93	3.4	314	9,396	17,421						
	Cabazon Pioneer	18,119	93	5.0	464	880	17,239						
	Lawrence Adit	5,651	93	2.0	187	1,275	4,376						
	Potrero Pioneer	15,163	93	8.7	806	1,973	13,190						
	Potrero to Lawrence	17,670	93	6.3	590	4,226	13,444						
	Potrero Shaft to West Portal	15,499			Completed	15,499	0	Invert	0	0	0	2,294	66,572
	TOTALS Ft.	247,018	248	5.1	1243	216,153	30,865	Arch	206	60.8	11,695	126,505	120,513
	Miles	(46.78)			(0.24)	(40.94)	(5.84)	Invert	0	0	0	34,261	212,757
DISTRIBUTION—CONTRACT													
GRIFFITH CO.	CAJALCO OUTLET	2,439	53	8.1	431	1,835	604					0	2,439
WEST CONSTRUCTION CO.	MONROVIA NO. 1 (From W.P.)	7,868			Completed	7,868	0		70	26.3	1,842	3,302	4,493
	MONROVIA NO. 2 (From Jct. 1)	940			Completed	940	0				0	0	855
	MONROVIA NO. 3	(32,105)				(27,053)	(5,052)				0	0	(32,069)
	East from Adit	11,340	88	10.3	903	10,432	908						
	West from Adit		81	5.6	456	4,638							
	From West Portal	20,765	88	5.1	452	11,983	4,144						
DIXON, BENT BROS. & JOHNSON	MONROVIA NO. 4 (From W.P.)	8,096	70	7.3	508	4,086	4,010					0	8,084
J. F. SHEA CO., Inc.	SIERRA MADRE (From E. Prtl)	6,700			Completed	6,700	0		51	14.0	713	6,700	0
DIXON, BENT BROS. & JOHNSON	PASADENA EAST	5,546			Completed	5,546	0				0	5,546	0
	PASADENA (From West Portal)	12,140			Completed	12,140	0		75	23.2	1,740	1,959	10,181
	SAN RAFAEL No. 1 (From W.P.)	4,040			Completed	4,040	0					0	4,040
	SAN RAFAEL No. 2 (From E.P.)	5,669	75	10.2	763	4,224	1,445					0	5,669
	TOTALS Ft.	85,543	455	7.7	3,513	74,432	11,111	Full	196	21.9	4,295	17,507	67,830
	Miles	(16.20)			(0.67)	(14.10)	(2.10)	Section			(0.81)	(3.31)	(12.85)

TION PROGRESS

CANAL, CONDUIT, SIPHON & PIPE LINES

August 29 to September 12, 1936

CANAL, CONDUIT AND SIPHON (MILES)

	Completed	Remaining
Excavation	116.75	28.97
Concrete	105.27	39.39
Back Fill	49.60	32.86

DISTRIBUTION PIPE LINE (MILES)

	Completed	Remaining
Excavation	11.43	30.15
Concrete	9.64	31.94
Back Fill	8.44	33.14

AQUEDUCT

SCHED. NO.	CONTRACTOR	FEATURES	Length In Feet	EXCAVATION—Feet			CONCRETE—Feet			BACKFILL—Feet		
				Period	To Date	Remain'g	Period	To Date	Remain'g	Period	To Date	Remain'g
1	AQUEDUCT CONSTR. CO.	Conduit and Siphons	22,025	0	22,025	0	0	22,025	0	0	22,025	0
2	BARRETT & HILP AND MACCO CORP.	Conduit and Siphons	30,569	0	29,314	1,255	0	24,584	5,985	0	22,400	8,169
3		Canal and Siphons	40,499	0	39,574	925	0	32,104	8,395	0	1,390	10,955
4	JAHN & BRESSI CONSTR. CO.	Canal and Siphons	53,218	0	53,218	0	0	53,218	0	0	1,992	1.083
5		Canal and Siphons	53,588	0	53,588	0	0	53,588	0	0	2700	1,320
6	WOOD AND BEVANDA	Siphon	15,521	0	15,521	0	0	15,521	0	0	13,043	2.478
7	BARRETT & HILP & MACCO CORP.	Canal and Conduit	27,707	0	27,707	0	0	27,707	0	0	12,170	0
8	WOOD AND BEVANDA	Canal and Siphons	49,579	0	49,579	0	0	49,174	405	0	7.090	800
9	UTAH CONSTRUCTION CO.	Canal, Conduit and Siphons	47,360	0	45,874	1,486	0	44,074	3,286	0	1,975	4,221
10	AQUEDUCT CONSTR. CO.	Canal and Siphons	44,505	0	44,505	0	0	44,505	0	0	3,594	1.256
11		Canal, Conduit and Siphons	44,002	2,460	12,570	31,432	0	0	44,002	0	0	10,322
12	THREE COMPANIES, INC.	Conduit and Siphons	32,977	0	28,789	4,188	0	24,652	8,325	0	23.030	9,947
13	AQUEDUCT CONSTR. CO	Canal, Conduit and Siphons	31,965	0	24,696	7,269	0	11,782	20,183	0	0	3.665
14	THOMPSON-STARRETT CO.	Conduit and Siphons	32,366	0	32,366	0	0	32,366	0	0	32,366	0
15		Conduit and Siphons	35,849	305	728	35,121	0	403	35.446	0	0	35,849
16		Conduit and Siphons	19,359	0	0	19,359	0	0	19.359	0	0	19.359
17	M. W. D.—FORCE ACCT.	Conduit and Siphons	21,961	825	17,512	4,449	7	12,615	9,346	0	10,843	11,118
18	J. F. SHEA CO., INC.	Conduit and Siphons	27,537	535	18,010	9,527	0	14,105	13,432	0	13,939	13,598
18J	MORRISON-KNUDSEN CO.	Siphons	9,809	0	9,809	0	0	9,809	0	0	9.809	0
19	J .F. SHEA CO., INC.	Conduit and Siphons	37,364	0	0	37,364	0	0	37,364	0	0	37,364
20		Siphons	18,618	0	18,618	0	0	18,618	0	0	18,618	0
20 A & B	M. W. D.—FORCE ACCT.	Siphons	735	0	705	30	0	0	735	0	0	735
21	GRIFFITH COMPANY (Outlet Channel Unlined)	Siphons	14,613	0	14,613	0	0	14,613	0	0	14,613	0
22		Siphons	7,229	0	7,229	0	0	7,229	0	0	7,229	0
23		Conduit and Outlet Channel	38,695	2	38,692	3	0	33,145	0	0	33,145	0
3	WINSTON BROS. CO. & WILLIAM C. CROWELL	Siphon (Gene Inlet)	1,877	0	1,676	201	0	589	1,288	0	530	1,268
4		Siphon (Copper Basin)	450	0	116	334	0	0	450	0	0	0
	TOTALS		759,977	4,127	607,034	152,943	7	546,426	208,001	0	252,501	173,507

DISTRIBUTION PIPE LINES

1	AMER. CONC. & STL. PIPE CO.	Precast Concrete Pipe	12,227	0	0	12,227	0	0	12,227	0	0	12,227
2	WESTERN PIPE & STL. CO.	Welded Steel Pipe	54,530	2,280	17,376	37,154	2,193	8,283	46,247	1,503	5,739	48,791
3	AMER. CONC & STL. PIPE CO.	Precast Concrete Pipe	20,124	0	0	20,124	0	0	20,124	0	0	20,124
4			25,867	2,146	25,622	245	2,114	25,553	314	2,204	24,830	1,037
5			24,895	0	0	24,895	0	0	24.895	0	0	24,895
6	J. F. SHEA CO., Inc.	Precast Concrete Pipe	27,348	625	4,329	23,019	481	4,155	23,193	975	3,191	24,157
7			30,044	0	0	30,044	0	0	30,044	0	0	30,044
8	UNITED CONC. PIPE CORP.	Precast Concrete Pipe	24,525	1,933	13,050	11,475	1,895	12,906	11,619	1,021	10,793	13,732
	TOTALS		219,560	6,984	60,377	159,183	6,683	50,897	168,663	5,703	44,553	175,007

MISCELLANEOUS CONSTRUCTION

August 29 to September 12, 1936

AQUEDUCT PUMPING PLANTS AND APPURTENANT WORKS

CONTRACTOR	FEATURES	EXCAVATION—Cu. Yds.				CONCRETE—Cu. Yds.				STEEL—Tons			
		Est.Quan.	Period	To Date	%	Est.Quan.	Period	To Date	%	Est.Quan.	Period	To Date	%
WINSTON BROS. CO. & WILLIAM C. CROWELL	Intake Plant	102,400	5.71	89,416	87.3								
	Gene Plant	92,600	256	79,829	86.2	13,370	0	1,044	7.8	2,052	0	7.0	0.3
WOOD AND BEVANDA	Iron Mt. Plant	358,700	0	224,245	62.5	19,897	0	55	0.3	1,707	0	0.6	0.1
L. E. DIXON CO.	Eagle Plant	227,695	15,291	126,575	55.6	21,122	0	656	3.1	2,160	0	37.4	1.7
NOT AWARDED	Hayfield Plant												
	TOTALS		16,118	520,065			0	1,755			0	45.0	

BOULDER TRANSMISSION LINE—FRITZ ZIEBARTH

FEATURES	Length-Line Mi.	Period	To Date	Percent
Footings Constructed	237.0	0	166.0	70.0
Towers Erected	237.0	14.0	95.0	40.1
Wire Strung	237.0	16.0	55.0	23.2

TELEPHONE LINES—NEWBERY ELECTRIC CO.

FEATURES	Length-Line Mi.	Period	To Date	Percent
Converting Spur to Truck Line	7.8	0	7.8	100
Constructing New Trunk Line	139.5	0	139.5	100

PARKER RESERVOIR—SIX COMPANIES, INC.

FEATURES	Est. Quan.	Period	To Date	Percent
Diversion Tunnels—Excav.	3,463 Ft.	0	3,463	100
Diversion Tunnels—Concrete	3,363	0	3,363	100
Dam Excavation	1,391,000 C.Y.	0	280,403	20.2
Dam Concrete	277,900 C.Y.	0	0	0

CAJALCO RESERVOIR—GRIFFITH COMPANY

FEATURES	Est. Quan.	Period	To Date	Percent
Diversion Tunnel	2,000 Ft.	0	2,000	100
Dam & Dike Excavation	651,000 C.Y.	23,140	389,970	59.9
Dike Fill	4,113,000 C.Y.	0	3,036,900	73.8
Dam Fill	3,410,000 C.Y.	103,100	573,200	16.8

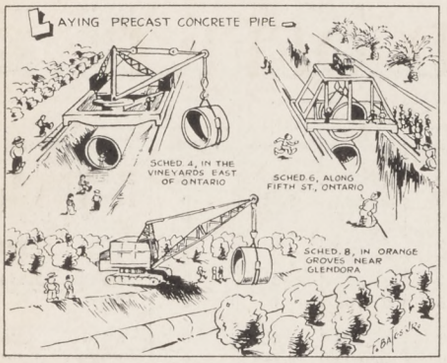
COMPLETED FEATURES

TUNNELS

CONTRACTOR	TUNNEL	Length in Miles	Work Started	Work Completed
MORRISON-KNUDSEN CO.	Mecca Pass, No. 1, 2 & 3	1.13	7-17-33	2-10-35
WEST CONSTRUCTION CO.	Whitewater Nos 1 & 2	1.94	7-18-33	4-15-35
SHOFNER & GORDON	Hayfield No. 2	1.03	7-8-33	7-27-35
HAMILTON & GLEASON	Bernasconi	1.18	4-19-33	11-21-35
J. F. SHEA CO., INC.	Cottonwood	3.81	6-14-33	12-29-35
HUNKIN-CONKEY CON. CO.	Hayfield No. 1	1.84	10-21-33	1-9-36
DIXON & BENT BROS.	W. Eagle-W. Por.	2.02	9-8-33	3-12-36
	TOTALS	12.95		

CANAL, CONDUIT AND SIPHON

CONTRACTOR	FEATURE AND NAME OR SCHEDULE	Length in Miles	Work Started	Work Completed
UNITED CONC. PIPE CO.	LITTLE MORONGO SIPHON	0.13	2-27-34	8-20-34
M.W.D.—FORCE ACCT.	FAN HILL COND. & SIPHON	0.32	10-21-33	11-19-34
GRIFFITH COMPANY	SCHEDULE NO. 20-C	1.33	5-3-35	9-14-35
	TOTALS	1.78		


LAYING PRECAST CONCRETE PIPE
SCHED. 4, IN THE VINEYARDS EAST OF ONTARIO
SCHED. 6, ALONG FIFTH ST., ONTARIO
SCHED. 8, IN ORANGE GROVES NEAR GLENDORA

Three rigs with a single purpose. Francis Bates, Jr., inspector on the Distribution open work, illustrates the methods of placing precast concrete pipe being used by American (Sch. 4), Shea (Sch. 6), and United (Sch. 8).

Fast Pace Set on Feeder Lines

At 10:00 A.M., September 15, the 2,154th joint of precast concrete pipe on schedule 4P of the distributing system was lowered into place by the American Concrete Pipe Co. gantry, to complete the first open work schedule west of Cajalco. The American was the first contractor to get into action on this type of work, and since March 21, 1936, when the first pipe was laid, the big 42-ton sections have been placed day after day with the precision and accuracy of clockwork. When Tom Gray, the gantry operator, placed the 2154th joint, it not only completed schedule 4, but started schedule 5, since one foot of the 12-foot section extended across the line leaving 24,894 feet to go in the next schedule. Don Rankin is general superintendent, and Roy Weatherford placing foreman for the contractors who will construct schedule 5, as well as schedule 1 and 3. Hugh Jones is the District's senior placing inspector on the work.

Farther east on the distribution upper feeder, Western Pipe and Steel Co. crews under General Superintendent L. L. White have been going to town on schedule 2S, one of the largest welded steel pipe lines in the world. During the week ending September 5, the crews directed by Morris Wilcox, foreman, laid 1,300 feet of the 10 ft. 8 in. diameter steel pipe. The sections, resembling the funnels of an ocean liner, are 33 feet long, although the gantry operated by Harold Woodruff handles them like so much stove wood. One of the interesting phases of this job is the welding together of the joints after they're placed in the trench. Charles Goetz is the District's senior inspector responsible for this exacting work.

MONTHLY REPORT REVIEWS ACTIVITIES ALONG THE AQUEDUCT LINE

(EDITOR'S NOTE: The following is a brief summary of some of the activities of the District as set forth in the monthly report of General Manager F. E. Weymouth, filed with the Board of Directors in September and covering work done in August.)

Legal Division

All necessary documents to secure payment for interim certificates Nos. 46 and 47, each in the principal sum of $1,476,000, covering bonds heretofore sold to the R. F. C., were prepared and the transactions closed. On August 28, the Board of Directors accepted the bid of the Reconstruction Finance Corporation for the purchase of $14,184,000 of bonds.

Miscellaneous Activities Division

During the month 932 employment applicants were cleared through the District's Labor Office. Of this number, 477 were made available for force account work, and 455 were made available for aqueduct contractors. Labor employment applications filed in August numbered 1555; registration certificates were issued to 276 applicants, making a total of 20,671 issued as of August 31.

Field Engineering and Construction

Testing Laboratory—Barrels of cement tested during the month, numbered 166,335, and approximately 181,340 barrels were shipped to the main aqueduct and distribution system. A special series of compression, tension, and modulus and elasticity tests were made on concrete specimens from precast pipe sections.

Safety Engineering — (See safety awards, page 3). The lost-time accident frequency for the first seven months of 1936 on all tunnels was 87, with 776,688 man-hours worked, and for all open work was 69, with 339,801 man-hours worked. On the Coachella Division, the accident frequency for the first seven months of 1936 was 79 per cent below the State five-year average for tunnel construction.

Operation of Utilities—During the period July 16 to August 15—5,515,093 kw.-hr. of power were used; 18,304 long distance telephone calls were handled, and 4,488,500 cubic feet of water were delivered.

Aqueduct Construction—(See tables on pages 4 and 5).

Civil Engineering Division

Specifications—Five sets of specifications were issued during August, and bids were opened on five sets, including the Hayfield Pumping Plant.

Design—Work was continued on the analysis and design of sections of the Copper Basin and Gene Wash dams, and on drawings for the Upper Feeder crossings of San Gabriel, Monrovia and Eagle Rock canyons, and the control structures to be located at the north portal of the Cajalco Outlet tunnel.

Materials—Orders were placed during the month for 1,509 tons of rail steel, and 1,359 tons of billet-steel reinforcement bars. Shop fabrication was started on the welded plate steel delivery pipe for Intake and Gene pumping plants.

Distribution Divison

Office Engineering — Comparative estimates were made of a number of alternative distribution system plans for initial and ultimate development. A study was started on the comparative costs of welded steel pipe and precast concrete pipe for the Eagle Rock-Palos Verdes cross feeder.

Field Construction—(See tables on pages 4 and 5).

Electrical Engineering Division

Construction work on electrical features is reported in tables on pages 4 and 5. Specifications for the discharge and inlet valves for all plants were issued, and work was continued on the design of the auxiliary mechanical equipment for all plants. Manufacturers' drawings for delivery lines, centrifugal pumps and other equipment were checked.

Personnel Division

Seventy-one classified positions were filled during the month. The net turnover for all divisions for July was 16.73, as compared to 17.86 in June.

Purchasing Division

During the period, 2,252 purchase orders were issued, totaling $257,988. Car forwardings totaled 716 in August, and a total of 14,864 for the first eight months of 1936.

Accounting and Costkeeping

The total cost of aqueduct construction features, including the Morris Dam, as of August 31, 1936, was $102,616,569.

NEWS FROM FIELD AND OFFICE

Cupid must have taken a vacation in June, his supposedly busy month, judging from the amount of unfinished business still being reported. The back-log reads:

St. Mark's Episcopal Church, Los Angeles, was the setting on August 29, for the wedding of Miss Wilma Hollins, and George Tauxe Jr. George is a chainman for the M. W. D. at Cajalco. He and his bride met when they were both undergraduates at the University of California.

Bill Smith, of the Division 4 force account headquarters, is to leave the ranks of eligibles at a ceremony to be performed at 8:00 A.M., September 28, at the Cathedral Chapel in Los Angeles. The bride to be is Miss Frances Leieritz, of Los Angeles.

"Al" Fink, a Lawrence Adit electrician, seems to be a believer in doing things first, and telling about them afterwards. The "surprise" of a surprise party in Banning a few days ago were place cards with the following: 'Announcing: Cliffola F. Woods and Alfred F. Fink, Married, Yuma, Arizona, September 7, 1936." The bride has been a resident of Banning for the past 10 years.

To most people, November 11 is Armistice Day, but "Ike" Henderson of the geological department at Banning is moving it up to October 11 this year. (No wise cracks from the back row about "Armistice" day.) For further information call the Banning office switchboard, and ask for "Kay" Dunnegan.

* * *

Norman Lehman, who has been Mr. Beall's right-hand man in the Los Angeles Personnel Division since February, 1935, resigned on September 19 to return to the University of Southern California. While continuing his education, he will work part time in the Trojan employment bureau.

* * *

A card from the Loma Linda Hospital announces the arrival in the Ivan Hallock household of June Clarice, weight 7 pounds, 10 ounces, on August 27. Ivan is a member of the Cabazon electricians staff.

* * *

The M. W. D. exhibit at the League of Municipalities convention at Santa Monica won first prize. Orchids and such, to Charlie Brandt and his staff who arranged the exhibit.

Aqueduct Temperatures
Sept. 1 to Sept. 15, 1936

	Max.	Min.
Div. 1	110	65
Div. 2	108	64
Div. 3	107	61
Div. 4	102	60
Divs. 5 & 6	103	47

A. G. Volbrecht, who has been with the District's Labor Office since it was opened in 1933, has been appointed as the Contractor's Representative in that office. He replaces Mr. C. H. Jacobs, who has represented the contractors for the past year, and who has recently resigned to return to the Brown Bevis Equipment Company with whom he was formerly associated. Both Mr. Jacobs, and Mr. Volbrecht are well known to aqueduct workers all along the line.

Here's one that *didn't* get away. Pictorial proof of the fish story related in the last issue of the NEWS. The fisherman is Colonel N. F. Jamieson, Employment Officer of the District. Known all along the line as "The Colonel" he has been with the District since December, 1932. Since the Labor Office was opened in January, 1933, Col. Jamieson estimates that more than 25,000 men have been cleared through it for work on the aqueduct.

Word filtering down from the Yosemite construction camp where Del Laneville, formerly of the Banning office, is now employed, indicates that Del has had to part with the white flannels and sport shirt. The elevation is 7,000 and they have already had two nights with temperatures of 32 degrees above zero.

* * *

E. L. Williams, who has worked in various capacities on aqueduct tunnels since March, 1933, resigned from the District on September 15, to accept a position as foreman with the Griffith Company at Cajalco. Prior to his resignation he had been an inspector on the Cajalco diversion and outlet tunnels.

* * *

Golf: Names make news, but we didn't know how to spell "Duke" MacConaghy's name in the wee small hours before the last NEWS went to press, so we neglected to mention that "Duke" who works in Purchasing, had the low gross in the tournament held on August 30. The trophy for the individual low net was won in a play-off between C. B. White and James C. Swinford, both of Accounting, by James, who had a net of 72. Plans for another tournament, open to both men and women, have now been completed. The first game of six, will be held on October 18—the entrance fee to cover cost of prizes will be 25 cents, and the green fee $1.00. The committee, headed by Swinford, will announce time and place later. D. K. Woodin at Banning, and F. W. Carleton at Berdoo, will supply information to Field addicts of the game.

* * *

Flash from Division 1 headquarters: Vital statistics stop Born comma to Mr. and Mrs. C. K. Chandler comma August 19 comma a boy comma Kenneth William comma weight 7¾ pounds stop. Either the "flash" came by Indian runner, or Chandler, who is an inspector on the Whipple Mt. tunnel, has just settled down enough to be coherent.

* * *

The set-em-up and knock-em-down squad of the L. A. Office (bowlers) are warming up for the fall tournament of the Civic Center Bowling League, beginning October 6. One of 12 teams, the District will be represented by A. W. McKinlay, O. T. Helping, G. N. Purington, G. H. Swanman, E. W. Gardner, and J. C. Swinford. To those who know what it's all about, the league will be an 825 scratch league.

Speed on Lining Upsets Record

The ink wasn't dry on the Long Canyon "blue ribbon" story in the Sept. 10 issue of the NEWS until the same blue ribbon was badly frayed from pot shots taken at it by tunnel lining crews all along the line.

Whipple Mountain

During the week ending September 12, Walsh Construction Co. crews under Superintendent L. M. Ramey at Whipple Mt. convincingly shattered the "average foot per shift" record by making a new high of 112.3 ft. per shift for 15 shifts. In spite of the fact that the work was shut down for six shifts for the Labor Day holiday, they placed 1,684 feet of arch during the week. Tom Walsh, president of the company whose headquarters are at Davenport, Iowa, came down from the firm's Grand Coulee job to inspect the work, which may, or may not, have had something to do with the speed. As previously noted, however, the crews under "shifters" Stense Graves, "Al" Allen and Eddy Hansen, have been making consistently fast progress since the lining was started. L. I. Johnstone, inspector on the job for the M. W. D. reports that they made 103.7 feet per shift back in May of this year.

West Eagle Mt.—East

Down in Division 3, Superintendent John Will's men lining the east portion of the West Eagle Mountain tunnel, have been doing their bit to hoist Broderick and Gordon's house flag to the top of the pole in the M. W. D. Olympiad. Working on a two-shift per day basis, they produced during the same week (ending Sept. 12) a new record for the two-a-day group, of 111.0 feet per shift. During 12 shifts, they poured 1,332 feet of arch.

Sierra Madre

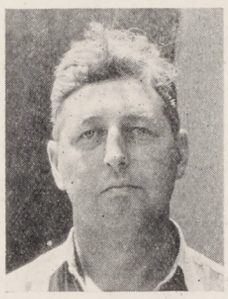
Under the City of Sierra Madre, J. F. Shea Co. crews, with "Ed" Shea at the helm, completed, on September 10, the last pour in the lining of that 6700 foot tunnel. Due to the fact that this, and other distribution tunnels, are circular, the lining is placed in one pour—there being no separate arch and invert. The lining work, started on March 30, 1936, has been particularly interesting, since the concrete was transit-mixed by trucks running between the batching plant and shutes placed in the city streets above the tunnel. Trains then loaded from hoppers at the bottom of the shutes and carried the mix to the placing point.

Who's Who On the Aqueduct

DON LIND

Superintendent for J. F. Shea Company

Born in Warrenton, Oregon, November 18, 1899. . . . After graduating from high school went to work in logging camps in the Pacific Northwest. . . . Started with the J. F. Shea Company in 1920, and has been with the firm ever since. . . . Experience includes construction work on Rowena railroad tunnel in eastern Oregon . . . Owyhee project (tunneling) also in Oregon . . . Has been on Colorado River aqueduct since initial work on Cottonwood tunnel. . . . Was superintendent on the Casa Loma siphon. . . . Is now superintendent in charge of plant and placing operations on schedules 6 and 7 of the distribution system (the pipe sections now being exhibited at the Pomona Fair grounds, are two of his prize products) . . . He is not married.

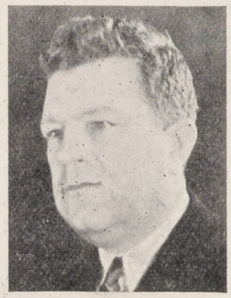


Don Lind

ARTHUR A. WEBER

Assistant General Counsel, M. W. D.

Mahanoy City, Penna., was his birth place, April 19, 1888. . . . Received his LL.B. at the University of Southern California in 1910. . . . Was City Attorney for Huntington Park 1914-1917. . . . 1921-1924 was City Attorney for Santa Monica. . . . . Also during period 1921-1923, was assemblyman in the California State Legislature. . . . Was member of the Board of Directors, M. W. D., representing City of Santa Monica from 1931 to 1934. . . . In the fall of 1934, he was appointed as Assistant General Counsel for the District. . . . Is married, and has three children, Margaret, Jane and Oliver.

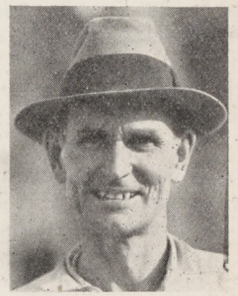


Arthur A. Weber

MAGNUS HJALMARSON

Superintendent 1000 Palms, M. W. D.

Born January 15, 1894, Cavalier, North Dakota. . . . Graduated C. E. University of North Dakota and post graduate work, Stevens Institute Technology, New Jersey. . . . His experience includes two years construction work with the American Land and Irrigation Co., Texas. . . . One year superintendent of construction San Joaquin Light and Power Corp., Fresno. . . . Nine years as foreman and superintendent on large class "A" buildings, reinforced concrete pile-driving, storm drains and flood control, reinforced concrete and structual steel bridges. . . . Two years commissioned officer U. S. Navy. . . . He has been with the District on construction work since February, 1933. He is married and has one son.



Magnus Hjalmarson

Fall Fashions Modeled at Weinie Bake

The NEWS "scoops" the field in presenting to the male members of the "aqueduckers" the ultra in informal sport and social apparel as worn at the L. A. Office weinie bake on Saturday evening, September 12.

Touched off with a brilliantly checkered sport jacket of black and white shetland cloth as the central motif, the ensemble was as follows: Hat—midnight blue, with a red feather at the required 45 degree angle, of a type known as "Alpine"; tie—none; shirt—dark blue polo, buttoned only at the throat (as the evening chill grew, it was buttoned farther south); coat—the aforecentioned central motif; trousers—gray, pleated slacks, razor edge crease; shoes—fawn suede, streamlined; socks—maybe, the rest of the outfit was so entrancing that the matter of socks wasn't noted.

Gentlemen interested in additional details should address inquiries to J. M. Luney, 306 W. 3rd St., Los Angeles. Unfortunately for those who did not attend the wienie bake, the clothes worn by Mr. Luney will probably not be modeled again by him, since they belong to his son.